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THE EFFECTS OF LONG TERM STORAGE ON THE MICROBIAL AND BIOBURDEN AMNIOTIC MEMBRANE IN TISSUE BANK USM

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SUMMARY

Human amnion as a temporary biological wound dressing has remained a beneficial and cost-effective graft. Human amniotic membrane also known to have good potential to help the regeneration of tissue. The aim of this study was to determine whether human amnion that has undergone long term storage temperature and time on freezer (-40°C to -80°C) have effect result on microbial and bioburden. Amniotic membrane (n=6) from different donors from spontaneous vaginal delivery (SVD) were analyzed the microbiological status and bioburden after storage on freezer. Samples of the tissue were examined for bacterial and fungal contamination. Tissue samples were swabbing and send to microbiology laboratory. Samples then culture onto Nutrient Agar and Sabouraud's Agar. The samples were incubated for 24 hours for bacterial and 4 weeks for fungal. Any microbial growth were observed and recorded. Bioburden is determined using the filtration method. Cell suspension is filtered through a membrane filter followed by incubation of the filter on appropriate growth medium to produce visible colonies. None of the examined samples showed bacterial or fungal contamination. All samples showed no growth on bioburden. Based on the current practice at Tissue Bank, raw amniotic membranes are kept for 5 years. However, this study shows that there is no significance effect on microbial and bioburden even though amniotic membrane are being kept up to 7 years.